

WHAT IS CLAIMED IS:

1. A process for treating the surface of a wet surface  
heat exchanger so as to build the hydrophilic porous  
5 structure,

said process comprising the operation of:

making the coating composition by blending micro  
solid particles with the hydrophilic binders;

10 spreading said coating composition on the surface  
of said heat exchanger by means of spraying or  
dipping; and

curing the coated surface of said heat exchanger.

15 2. A process for treating the surface of a wet  
surface heat exchanger according to claim 1, wherein  
said micro solid particles is 5 ~ 100  $\mu\text{m}$  in diameter.

20 3. A process for treating the surface of a wet  
surface heat exchanger according to claim 1, wherein  
the thickness of the hydrophilic porous structure  
coating on said surface of a heat exchanger is  
adjusted by controlling the viscosity of binder.

25 4. A process for treating the surface of a wet surface  
heat exchanger so as to build the hydrophilic porous

structure,

said process comprising the operation of:

roughening the surface of said heat exchanger by  
corroding said surface with chemical or  
5 electrochemical process, or by use of the physical  
process; and

processing hydrophilization of said surface of  
said heat exchanger.

10 5. A process for treating the surface of a wet surface  
heat exchanger according to claim 4, wherein said  
surface roughness is 5 ~ 100  $\mu\text{m}$  in height.

15 6. A process for treating the surface of a wet surface  
heat exchanger according to claim 1, wherein the  
method for building the hydrophilic porous structure  
on the surface of said heat exchanger is:

20 building said hydrophilic porous structure on the  
surface of each components of a heat exchanger,  
thereafter assembling each components to construct a  
heat exchanger; or

building said hydrophilic porous structure on the  
surface of a heat exchanger which is assembled in  
advance.

7. A process for treating the surface of a wet surface heat exchanger according to claim 4, wherein the method for building the hydrophilic porous structure on the surface of said heat exchanger is:

5        building said hydrophilic porous structure on the surface of each components of a heat exchanger, thereafter assembling each components to construct a heat exchanger; or

10        building said hydrophilic porous structure on the surface of a heat exchanger which is assembled in advance.